

SOSYANTS, Vasilii Georgiyevich; BELILOVSKAYA, Kseniya Iosifovna;
NAUMENKO, Valentin Sergeyevich; PROKHOROV, Aleksandr
Nikolayevich; LUCHAY, G.A., red.; ~~RACHEVSKAYA, M.I.,~~
~~red. red-va;~~ SALAZKOV, M.P., tekhn. red.

[Over-all mechanization of labor consuming processes in
the construction and overhauling of streetcar tracks] Kom-
pleksnaya mekhanizatsiya trudoemkikh protsessov pri
stroitel'stve i kapital'nom remonte tramvaynykh putei. Mo-
skva, Izd-vo M-va kommun.khoz.RSFSR, 1963. 78 p.

(MIRA 16:8)

(Street railways--Track)

PROKHOROV, A.N.; KURDENKOV, V.F.

Vibratory mixers for the preparation of road and construction materials. Nauch. trudy AKKH no.32:187-204. '64.

(MIRA 19:1)

Author: [redacted] (N) (S) (U) (C) (R) (G) (D) (E) (F) (H) (I) (J) (K) (L) (M) (N) (O) (P) (Q) (R) (S) (T) (U) (V) (W) (X) (Y) (Z) (AA) (AB) (AC) (AD) (AE) (AF) (AG) (AH) (AI) (AJ) (AK) (AL) (AM) (AN) (AO) (AP) (AQ) (AR) (AS) (AT) (AU) (AV) (AW) (AX) (AY) (AZ) (BA) (BB) (BC) (BD) (BE) (BF) (BG) (BH) (BI) (BJ) (BK) (BL) (BM) (BN) (BO) (BP) (BQ) (BR) (BS) (BT) (BU) (BV) (BW) (BX) (BY) (BZ) (CA) (CB) (CC) (CD) (CE) (CF) (CG) (CH) (CI) (CJ) (CK) (CL) (CM) (CN) (CO) (CP) (CQ) (CR) (CS) (CT) (CU) (CV) (CW) (CX) (CY) (CZ) (DA) (DB) (DC) (DD) (DE) (DF) (DG) (DH) (DI) (DJ) (DK) (DL) (DM) (DN) (DO) (DP) (DQ) (DR) (DS) (DT) (DU) (DV) (DW) (DX) (DY) (DZ) (EA) (EB) (EC) (ED) (EE) (EF) (EG) (EH) (EI) (EJ) (EK) (EL) (EM) (EN) (EO) (EP) (EQ) (ER) (ES) (ET) (EU) (EV) (EW) (EX) (EY) (EZ) (FA) (FB) (FC) (FD) (FE) (FF) (FG) (FH) (FI) (FJ) (FK) (FL) (FM) (FN) (FO) (FP) (FQ) (FR) (FS) (FT) (FU) (FV) (FW) (FX) (FY) (FZ) (GA) (GB) (GC) (GD) (GE) (GF) (GG) (GH) (GI) (GJ) (GK) (GL) (GM) (GN) (GO) (GP) (GQ) (GR) (GS) (GT) (GU) (GV) (GW) (GX) (GY) (GZ) (HA) (HB) (HC) (HD) (HE) (HF) (HG) (HH) (HI) (HJ) (HK) (HL) (HM) (HN) (HO) (HP) (HQ) (HR) (HS) (HT) (HU) (HV) (HW) (HX) (HY) (HZ) (IA) (IB) (IC) (ID) (IE) (IF) (IG) (IH) (II) (IJ) (IK) (IL) (IM) (IN) (IO) (IP) (IQ) (IR) (IS) (IT) (IU) (IV) (IW) (IX) (IY) (IZ) (JA) (JB) (JC) (JD) (JE) (JF) (JG) (JH) (JI) (JJ) (JK) (JL) (JM) (JN) (JO) (JP) (JQ) (JR) (JS) (JT) (JU) (JV) (JW) (JX) (JY) (JZ) (KA) (KB) (KC) (KD) (KE) (KF) (KG) (KH) (KI) (KJ) (KK) (KL) (KM) (KN) (KO) (KP) (KQ) (KR) (KS) (KT) (KU) (KV) (KW) (KX) (KY) (KZ) (LA) (LB) (LC) (LD) (LE) (LF) (LG) (LH) (LI) (LJ) (LK) (LL) (LM) (LN) (LO) (LP) (LQ) (LR) (LS) (LT) (LU) (LV) (LW) (LX) (LY) (LZ) (MA) (MB) (MC) (MD) (ME) (MF) (MG) (MH) (MI) (MJ) (MK) (ML) (MM) (MN) (MO) (MP) (MQ) (MR) (MS) (MT) (MU) (MV) (MW) (MX) (MY) (MZ) (NA) (NB) (NC) (ND) (NE) (NF) (NG) (NH) (NI) (NJ) (NK) (NL) (NM) (NN) (NO) (NP) (NQ) (NR) (NS) (NT) (NU) (NV) (NW) (NX) (NY) (NZ) (OA) (OB) (OC) (OD) (OE) (OF) (OG) (OH) (OI) (OJ) (OK) (OL) (OM) (ON) (OO) (OP) (OQ) (OR) (OS) (OT) (OU) (OV) (OW) (OX) (OY) (OZ) (PA) (PB) (PC) (PD) (PE) (PF) (PG) (PH) (PI) (PJ) (PK) (PL) (PM) (PN) (PO) (PP) (PQ) (PR) (PS) (PT) (PU) (PV) (PW) (PX) (PY) (PZ) (QA) (QB) (QC) (QD) (QE) (QF) (QG) (QH) (QI) (QJ) (QK) (QL) (QM) (QN) (QO) (QP) (QQ) (QR) (QS) (QT) (QU) (QV) (QW) (QX) (QY) (QZ) (RA) (RB) (RC) (RD) (RE) (RF) (RG) (RH) (RI) (RJ) (RK) (RL) (RM) (RN) (RO) (RP) (RQ) (RR) (RS) (RT) (RU) (RV) (RW) (RX) (RY) (RZ) (SA) (SB) (SC) (SD) (SE) (SF) (SG) (SH) (SI) (SJ) (SK) (SL) (SM) (SN) (SO) (SP) (SQ) (SR) (SS) (ST) (SU) (SV) (SW) (SX) (SY) (SZ) (TA) (TB) (TC) (TD) (TE) (TF) (TG) (TH) (TI) (TJ) (TK) (TL) (TM) (TN) (TO) (TP) (TQ) (TR) (TS) (TT) (TU) (TV) (TW) (TX) (TY) (TZ) (UA) (UB) (UC) (UD) (UE) (UF) (UG) (UH) (UI) (UJ) (UK) (UL) (UM) (UN) (UO) (UP) (UQ) (UR) (US) (UT) (UU) (UV) (UW) (UX) (UY) (UZ) (VA) (VB) (VC) (VD) (VE) (VF) (VG) (VH) (VI) (VJ) (VK) (VL) (VM) (VN) (VO) (VP) (VQ) (VR) (VS) (VT) (VU) (VV) (VW) (VX) (VY) (VZ) (WA) (WB) (WC) (WD) (WE) (WF) (WG) (WH) (WI) (WJ) (WK) (WL) (WM) (WN) (WO) (WP) (WQ) (WR) (WS) (WT) (WU) (WV) (WW) (WX) (WY) (WZ) (XA) (XB) (XC) (XD) (XE) (XF) (XG) (XH) (XI) (XJ) (XK) (XL) (XM) (XN) (XO) (XP) (XQ) (XR) (XS) (XT) (XU) (XV) (XW) (XX) (XY) (XZ) (YA) (YB) (YC) (YD) (YE) (YF) (YG) (YH) (YI) (YJ) (YK) (YL) (YM) (YN) (YO) (YP) (YQ) (YR) (YS) (YT) (YU) (YV) (YW) (YX) (YZ) (ZA) (ZB) (ZC) (ZD) (ZE) (ZF) (ZG) (ZH) (ZI) (ZJ) (ZK) (ZL) (ZM) (ZN) (ZO) (ZP) (ZQ) (ZR) (ZS) (ZT) (ZU) (ZV) (ZW) (ZX) (ZY) (ZZ)

AUTHORS: Yakubchik, B. P. (Engineer); Prokhorov, N. S. (Doctor of technical sciences); Romanenko, V. N. (Engineer)

ORG: none

TITLE: The effect of the rate of deformation on the mechanical properties of the zone of steel HEAT-TREATED near the seam

SOURCE: Moscow. Vyssheye tekhnicheskoye uchilishche. Prochnost' svarnykh konstruktsey (Strength of welded structures). Moscow, Izd-vo Mashinostroyeniye, 1966, 216-226

TOPIC TAGS: welding, metal deformation, welding technology, weld effect, weld evaluation, steel/ HEAT-TREATED steel

ABSTRACT: Experimental work was performed for the purpose of duplicating brittle failures in austenite steels at high temperatures. The experiments were aimed at finding methods for qualitative analysis of the tendencies of alloys toward localized failure. Specifically sought was the reaction of the process of failure on the variation of the rate of deformation in a wide range and with temperatures ranging from 500--650C. A description of the experimental methods, specimens and sizes, etc, is given. Plotted experimental data include: the variation of the strength limit and absolute elongation with various tensile strain and for various material and temperature combinations; variation of the strength limit of nonuniform specimens

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* L 10251-37

ACC NR: AT6030945

exposed to different types of welding. Photographs of fractured specimens are shown. The authors note that at relatively high rates of deformation the entire section in the macroscale undergoes a failure. At low rates of deformation the failure of the specimen was more localized and was manifested as cracks propagating at low strength and plasticity. The effect of preheating is minor with higher rates of deformation, but is increasingly important with reduced rates of deformation. Various effects of the type of welding are discussed. Orig. art. has: 9 figures.

SUB CODE: 11, 13/ SUBM DATE: 11Mar66/ ORIG REF: 003/ OTH REF: 001

Card 2/2

L 10288-67 ENP(m)/ENP(v)/ENP(k)/ENP(t)/ENP(c) JF/UR/UR
 ACC NR: AT6030944 (N) SOURCE CODE: UR/0000/66/000/000/0178/0189

AUTHORS: Prokhorov, N. N. (Doctor of technical sciences); Dubrov, V. N. (Engineer) 2.2

ORG: none

TITLE: The effect of the weld type on the pattern of crystallization and on the character of failure of the seam metal

SOURCE: Moscow. Vyssheye tekhnicheskoye uchilishche. Prochnost' svarnykh konstruktsey (Strength of welded structures). Moscow, Izd-vo Mashinostroyeniye, 1966, 178-189

TOPIC TAGS: welding technology, welding, arc welding, seam welding, crystallization, metal crystallization, steel alloy/ VKS-1 steel alloy

ABSTRACT: Investigation is made of the effect of the type of weld on the structure, mechanical properties, and also on the failure of metal in a seam. Variation of the pattern of crystallization was experimentally studied on light alloy high-strength steel VKS-1. Specimens 2.5 mm thick were melted by an argon-arc device so that a planar pattern of crystallization was maintained. The welding was set so that a certain constant weld seam cross section was maintained for all rates of one-pass welding. Preheating effects were plotted against linear energy (joules/cm) and welding rate (cm/sec). Additional data plots show the effect of preheating and welding rate on the angle of slope of tangential crystallite with the longitudinal seam axis. This angular relationship is

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L 10288-57

ACC NR: AT6030944

$$\frac{\sigma}{2} = \arctg \left[\frac{0.3223n}{m} \left(1 - \frac{1}{2.718n^2} \right) \frac{q}{\lambda \delta T} \xi \right],$$

where ξ , m , and n are computed or tabulated coefficients, and T is the equilibrium temperature of hardening (see N. N. Prokhorov, A. S. Mastryukova. Raschet skhemy kristallizatsii svernogo shva. Svarochnoye proizvodstvo, 1961, No. 2). The authors found that the method of one-pass welding of steel leads to a substantial change in its primary structure and mechanical properties. A mean rate of welding was found for which the impact strength at room temperature and the strength limit at the temperature of liquid nitrogen are at maximums. The character of the fracture of a metal seam is basically a function of its primary structure. Hence control of the mechanical properties of the seam metal in high strength steels by means of weld process variation is of potential benefit and thus deserves the attention of the technologists in this field. Orig. art. has: 8 figures and 6 equations.

SUB CODE: 11, 13/ SUBM DATE: none/ ORIG REF: 005/ OTH REF: 001

Card 2/2

SOV/128-58-12-11/21

AUTHORS: Prokhorov, A.P. and Laskarzhevskiy, N.I.

TITLE: The Chill Casting of Iron (Kokil'noye chugunnoye lit'ye)

PERIODICAL: Liteynoye proizvodstvo, 1958, Nr 12, pp 20 - 21 (USSR)

ABSTRACT: The process of chill-casting in the production of kitchen-range plates is described and illustrated.. The chill-casting method was brought into use at the Bobruyskiy vesovoy zavod (Bobruysk Scales-Building Plant). Its use raised labor efficiency by 400% in comparison with 1955. There are 2 diagrams and 1 graph.

Card 1/1

PROKHOROV, A.V., kandidat veterinarnykh nauk.

Practical measures for eliminating tuberculosis in poultry.
Veterinariia 32 no.11:40-41 N '55. (MIRA 8:12)

1. Vsesoyuznyy institut eksperimental'noy veterinarii.
(TUBERCULOSIS IN POULTRY)

PROKHOROV, A.V.; FOMINA, A.Ya; AKULOV, A.V.

Blood drop agglutination for diagnosing tuberculosis in poultry.
Veterinariia 32 no.11:42 N '55. (MLRA 8:12)

1.Vsesoyuznyy institut eksperimental'noy veterinarii.
(TUBERCULOSIS IN POULTRY) (AGGLUTINATION)

PROKHOROV, A.V., kandidat veterinarnykh nauk.

Elimination of enzootic colibacillosis in calves. Veterinariia
32 no.12:20-24 D '55. (MLRA 9:4)
(CALVES--DISEASES) (DIARRHEA)

PROKHOROV, A.V.

From practice in controlling parasite infestations in poultry.
Veterinariia 32 no.12:44-45 D '55. (MLRA 9:4)
(POULTRY---DISEASES)

PROKHOROV, A.V., kand. vet. nauk.

Prophylactic measures in raising ducklings. Ptitsevodstvo 8 no.5:
33-35 My '58. (MIRA 11:5)

1. Vsesoyuznyy institut eksperimental'noy veterinarii.
(Ducks)

~~PROKHOROV~~, A.V., kand.vet.nauk; AKULOV, A.V., kand.vet.nauk.

Diagnostic value of the blood drop agglutination test in
fowl tuberculosis. Veterinariia 35 no.2:45-48 F '58.

(MIRA 11:2)

1.Vsesoyuznyy institut eksperimental'noy veterinarii.
(Tuberculosis in poultry)

PROKHOROV, A.V., kand.vet.nauk

New in vivo method for diagnosing tuberculosis in poultry.
Veterinariia 35 no.9:60-64 S '58. (MIRA 11:9)

1. Vsesoyuznyy institut eksperimental'noy veterinarii.
(Tuberculosis in poultry)

PROKHOROV, A. V., FOMINA, A. Ya. and KONTRIMAVICHUS, L. M.

"About the methods of making tubercular antigen."

Veterinariya, Vol. 37, No 6, 1960, p. 30

*Caus Vet. Sci -
all-Union Inst. Experimental Vet.*

PROKHOROV, A. V. (Candidate of Veterinary Sciences)

"Technique of infecting chick embryos. (John R. Gorham. Am. J. Vet. Research, 1957, v.18, p.691-692). Report."

Veterinariya, Vol. 37, No. 9, p. 90, 1960.

L 29381-66 EWI(m)/EWP(t)/ETI IJP(c) JD

ACC NR: AP6019796

SOURCE CODE: UR/0286/65/000/004/0113/0113

INVENTOR: Prokhorov, A. V.; Shalamov, I. I.; Fetisov, S. G.; Prokhorov, P. A.;
Tutov, I. Ye.; Parshin, A. A.; Kavesh, L. D.; Slutskaya, T. M.; Yunger, S. V. 47
 B

ORG: none

TITLE: Low-alloy steel / Class 18, No 148088

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 4, 1965, 113

TOPIC TAGS: low alloy steel, vanadium, boron, tensile strength, heat resistance

ABSTRACT: A low-alloy steel is proposed which has vanadium and boron added to it to increase strength and heat resistance. Its chemical composition is: 0.13-0.18% C, 1.2-1.6% Mn, 0.5-0.8% Si, 0.3-0.6% Cr, 0.15-0.25% Mo, 0.08-0.12% V and 0.003% (max) B.
 [JPRS]

SUB CODE: 11, 20 / SUBM DATE: none

Card 1/1 CC

FETISOV, S.G.; PROKHOROV, A.Y.; STAPANOV, F.P.; Primali uchastiye:
GONCHAROV, A.F., inzh.; P'YANKOVA, V.F., inzh.

Effect of deoxidation on properties of low carbon structural
steel alloyed with manganese. Stal' 24 no.12:1090-1092 D '64.
(MIRA 18:2)

L 51301-65 EWT(m)/EWP(k)/EWP(z)/EWA(c)/EWP(b)/T/EWA(d)/EWP(w)/ESP(t)
 ACCESSION NR: AP5016115 Pf-4/Pad IJP(c) UR/0133/64/000/010/0927/0930
 MJW/JD/HW
 AUTHOR: Fetisov, S. G. (Candidate of technical sciences); Prokhorov, A. V. (Engineer);
 Stepanov, F. P. (Engineer) 36
 TITLE: Steel MK-40 as a substitute for nickel steels MS-1 and SKhL-4 33
 SOURCE: Stal', no. 10, 1964, 927-930 8
 TOPIC TAGS: steel, nickel steel, ship component, metal property, alloy steel, sheet
 metal, metallurgic process/MK-40 steel, MS-1 steel, SKhL-4 steel
 Abstract: The non-nickel steel MK-40 with a yield point of not less than
 40 kg/mm² can be used entirely for welded hull shipbuilding sheet steel with
 thicknesses from 1 to 12 mm. According to its physical, mechanical and engineer-

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ACCESSION NR: AP5016415

27 3
brittle fracture; however, the presence in them of nickel (1.0-1.3 and 0.5-0.8%) substantially hinders their further application in this field. As a result of laboratory and industrial investigations, completed on steel grade MK (manganese and silicon), which has been supplied for a long time by the

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ACCESSION NR: AP5016415

hardened condition; thermal hardening for sheets SKhL-4 and MS-1 is used beginning with a thickness of $d = 16$ mm).

	MK-40		
$d, \text{ mm} \dots\dots\dots$	4-8	9-15	16-32
$\sigma_B, \text{ kg/mm}^2 \dots\dots\dots$	54-75	54-70	54-66

	SKhL-4				MS-4
$d, \text{ mm} \dots\dots\dots$	4-5	6-8	9-15	16-32	21-32
$\sigma_B, \text{ kg/mm}^2 \dots\dots\dots$	54-75	54-60		54-66	

An industrial batch of steel MK-40 was prepared at the plant for constructing a lumber carrier (237 sheets, 16-32 mm thick, from the metal of 23 melts).

The steel was smelted in basic open-hearth furnaces with a capacity of 70-130 tons by the scrap iron-ore process into molten pig iron; preliminary deoxidation and alloying the metal with manganese was done in the furnace by adding the

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L 51301-65

ACCESSION NR: AP5016415

The metal was bottom poured to produce sheet ingots weighing 2.55-8.0 tons.
The chemical composition of the metal of the entire melt was within grade limits.
The ingots were heated according to a regime established for

Before rolling, the ingots were heated according to a regime established for carbon steels.

Another batch of steel MK-40 (2011 tons), 12-32 mm thick, was made for construction purposes.

Experience in making sheet steel MK-40 indicated that this technology completely satisfies the technical requirements for the physical and mechanical properties. MK-40 can be used in place of steels MS-1 and SKhL-4. The saving of nickel thereby amounts to 11.5 and 6.5 kg/ton of sheet, while the saving of copper is correspondingly 2 and 3 kg/ton. Orig. art. has 4 graphs.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: MM

NO REF NOV: 003

OTHER: 000

JFRS

Card

PECHENOV, A.V.

Analysis of the oxidation-reduction equilibria in a solution of H_2O_2 during the processing of sulfate pulp under hydrochloric acid solution water. Trudy Kar. Fil. AN SSSR no 38:53-75 '63. (LBR 14.3)

1. Tsellyulennyy cavi "Pitkyarenta".

KOSHILOV, M.F.; PROKHOROV, A.V.

Resources of wood chemistry in sulfate pulp production. Izv. Akad. Nauk SSSR no.35:3-8 '63. (MIRA 18:3)

1. Institut lesa Kareli'skogo filiala AN SSSR (for Koshailov).
2. Tsellyuloznyy zavod "Pitkyaranta" (for Prokhorov).

PROKHOROV, A.V.

Simplified method for industrial pH control. Bum. prom. 36
no.11:25-26 N '61. (MIRA 15:1)

1. Nachal'nik nauchno-issledovatel'skoy laboratorii zavoda
"Pitkyaranta".

(Hydrogen-ion concentration)
(Woodpulp--Analysis)

KOMSHILOV, N.F.; LETONMYAKI, M.N.; PROKHOROV, A.V.; YEFISHEV, I.I.

Ways and methods for reducing the amount of sulfuric acid used in
producing tall oil from sulfate soap. Izv. Kar. i Kol' fil. AN SSSR
no.1:151-155 '59. (MIRA 12:9)

1.Laboratoriya lesokhimii Karel'skogo filiala AN SSSR i Nauchno-
issledovatel'skiye gruppy Pitkyaranskogo sul'-fatnogo zavoda
i Segezhskego tsellyulozno-bumazhnogo kombinata.
(Sulfuric acid) (Tall oil)

PROKHOROV, A. V.

Industrial purification of sulfate turpentine. I. I. Pishov,
A. V. Frokhorov, and A. P. Matvishkina (Pala and Paper
Mikrochim. J. *Primen.*, 29, No. 6, 23-27 (1961). --
App. and method for obtaining terpentine (I) with a low-S
content from kraft turpentine (II) by distn. are described.
II contg. 0.26% Me₂Si, 0.12% Me₂S, and 0.10% Me₂Si
was batch distd.; 10,000 kg. II (contg. 35.84 kg. S) gave 100
kg. head fraction (18.5 kg. S), b. 34-50°; 200 kg. inter-
mediate fraction, b. 90-150° (1.0 kg. S); 6700 kg. product
fraction, b. 150-70° (1.24 kg. S); and 3600 kg. still bottoms
(15.0 kg. S). I no. 1.467, d. 0.857, b. 157°, 97% b. up to
170°, 0.13% residue on evapn., acid no. 0.11, contained 70%
phenol. John Lake Keys

PROKHOROV, A.V.
YEFISEV, I.I.; PROKHOROV, A.V.

Catching blow-off products of sulfate cooking of cellulose. Bus.
prom. 30 no.1:20-22 Ja '55. (MLRA 8:3)

1. Segeshskiy tsellyulozno-bumazhnyy kombinat.
(Cellulose)

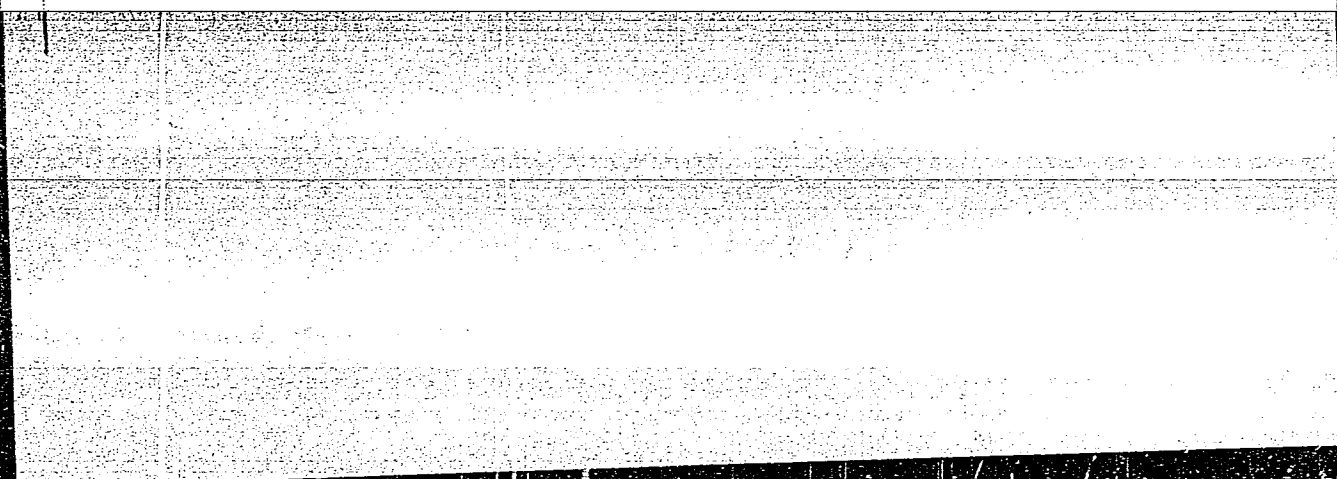
PROKHOROV, A.V.

Apparatus for a rapid determination of moisture content in chips.
Bum.prom.30 no.7:18-19 J1'55. (MIRA 8:10)

1. Segezhskiy tsellyulozno-bumazhnyy kombinat
(Wood pulp)

"APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001343120013-3



APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001343120013-3"

PROKHOROV, A.V.

AUTHOR: Prokhorov, A.V., Engineer.

133-9-15/23

TITLE: Low Alloy Steel MK for Important Welded Structures.
(Nizkolegirovannaya stal' MK dlya otvetstvennykh svarnykh
konstruktsiy) 17

PERIODICAL: Stal', 1957, no. 9, pp. 829 - 833 (USSR).

ABSTRACT: MK steel (C $\leq$ 0.12%, Mn 1.30 - 1.65%, Si 0.8 - 1.2%,
Cu 0.15 - 0.40%, Ti 0.01 - 0.03%, Cr $\leq$ 0.3%, Ni $\leq$ 0.3%,
S $\leq$ 0.045%, P $\leq$ 0.045%) was developed for the construction of
the Kiev-Moscow gas pipeline. Its mechanical properties, welda-
bility and resistance to corrosion as well as smelting and
rolling practices are described. The economy obtained in using
this steel instead of MCT 3 steel is demonstrated, on the
saving of metal obtained during the construction of the above
pipe line for which tubes of 529 mm in diameter were made of
8 mm wall thickness instead of 12 mm wall thickness and on an
example of manufacturing railway tanks for liquid propane
(51 m³ in capacity) operating at a pressure of 20 atm and a
temperature of - 50 °C. Using MK steel plates (26 and 32 mm
thick) instead of 20 K steel, a saving of 4 tons of metal per
tank was obtained. In the editorial note it is stated that the
introduction of copper (which is in short supply) into MK
Card1/2 steel is not justified, as tubes from this steel are usually

Low Alloy Steel MK for Important Welded Structures.

133-9-15/23

protected from corrosion. Moreover, the yield strength of this steel does not always correspond to technical conditions required.

There are 5 figures and 4 references, 3 of which are Slavic.

ASSOCIATION: Works im. Il'ich (Zavod im. Il'icha)

AVAILABLE: Library of Congress.

Card 2/2

Prokhorov, A.V.

- 25(1) PHASE I BOOK EXPLORATIONS SOV/5421
- Abadulyn nauk USSR, Kiev, Institut elektrosvarki imeni akademika Ye. O. Patona
 "Vvedeniye norykh spetsyevykh" v. 2 (Introduction of
 New Welding Methods in Industry) Collection of Articles, No. 2) Kiev, Gos-
 izdatve tekhn. lit-ry Ukrainy, 1959. 134 p. Arzava ally literat.
 5,000 copies printed.
- Ed.: V. Garkhala; Tech. Ed.: S. Metushevich.
- FOREWORD: This book is intended for workers in the welding industry.
- CONTENTS: The book contains a discussion of welding techniques and problems by
 groups of scientists and welders. Much attention is given to problems in the
 application of new methods of mechanized welding and electro-slag welding.
 This is the second collection of articles under the same title prepared and
 published by the Institut elektrosvarki imeni Ye. O. Patona (Institute of
 Electric Welding imeni Ye. O. Patona). The preface is written by S. Ye. K.
 Academician of the Ukrainian Academy of Sciences and winner of the Lenin.
 There are no references.
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AUTHOR: Prokhorov, A.V., Engineer SOV/133-59-1-21/23

TITLE: ~~An Increase in Strength and a Reduction in Weight of~~
Welded Tubes from MK Steel (Povysheniye prochnosti i
umen'sheniye vesa svarnykh trub iz stali MK)

PERIODICAL: Stal', 1959,¹⁹ Nr 1, pp 88 - 91 (USSR)

ABSTRACT: On the basis of statistical treatment of the test results of pipes, 529 x 8 mm, made from MK steel, the optimum composition of the metal which would secure the required mechanical properties was established. By manufacturing steel of the optimum composition, the wall thickness of the above pipes (for liquid and gaseous petroleum products, tested at 85 atm) was reduced from 8 mm to 7 mm. The necessary strengthening of the welded seam was obtained by using electrode wire SV10GSA and flux OSTs-45. The optimum composition of steel, %: $C \leq 0.12$, $Mn 1.3-1.65$, $Si 0.8-1.2$, $Cu 0.15-0.40$, $S \leq 0.050$, $P \leq 0.045$, $Ni \leq 0.3$, $Cr \leq 0.3$. There are 2 figures.

ASSOCIATION: Zavod im. Il'icha (imeni Il'ich Works)

Card1/1

KUZEMA, I.D., kand.tekhn.nauk; PROKHOROV, A.V.

Mechanical and thermomechanical hardening of low-alloy
and low-carbon steel. Stal' 20 no.8:745-750 Ag '60.
(MIRA 13:7)

1. Zavod imeni Il'icha.
(Steel alloys--Cold working)

S/028/61/000/004/003/007
B103/B206

AUTHORS: Prokhorov, A. V., Sokolovskiy, P. I.
TITLE: Elimination of copper from 10Г2СД (10G2SD) steel
PERIODICAL: Standartizatsiya, no. 4, 1961, 28-31

TEXT: The authors describe their experiments to eliminate copper from low-alloy carbon steel of the type 10Г2СД (MK) (10G2SD (MK)) produced at the zavod im. Il'icha (Plant imeni Il'ich). This steel with reduced copper content is now to be called 10Г2С (10G2S). According to ГОСТ 5058-57 (GOST 5058-57), 10G2SD contains in %: C maximum 0.12, Si 0.8-1.1, Mn 1.3-1.65, Cu 0.15-0.30. At the TsNIIChM (Central Scientific Research Institute of Ferrous Metallurgy) it was proved that such a small copper addition does not increase corrosion resistance of the steel. The possibility was thus given to eliminate this material, of which there is a shortage. Experimental lots of pipes and sheets (12, 20, 30, and 40 mm thick) were produced at the plant, and a change of the tentative technical conditions (for pipes БТУ ОС-06-58, ВТУ ОС-06-58) was approved. The Cu content in type 10G2S amounts therefore to a maximum of 0.3%, and the Si content to a maximum of 0.8-1.1%.
Card 1/3

S/028/61/000/004/003/007
B103/B206

Elimination of ...

mum of 1.2%. The steel sheets mentioned were tested at the TsNII stroitel'-nykh konstruktsiy (Central Scientific Research Institute of Structural Parts) mainly in hot-rolled state, the rest in tempered state (normalized, hardened, and drawn). The results were statistically evaluated, and distribution curves for the content of most important elements and those for the chemical properties under tension, as well as the resilience values at -40°C, were determined. The statistical analysis showed that the mean values of mechanical characteristics of types 10G2SD and 10G2S differ. In order to determine the sensitivity of type 10G2S to stress concentration during vibration loads, and to clarify the effect of lack of copper, samples were tested with and without stress concentrators. The authors used the methods of the NII mostov Leningradskogo instituta inzhenerov zheleznodorozhnogo transporta (Scientific Research Institute of Bridges of the Leningrad Institute of Railroad Transport Engineers). The authors summarize their investigation results as follows: The steel of type 10G2S (rolled product) corresponds to the requirements of GOST 5058-57 for the type 10G2SD and is superior in many ways to other low-alloy steel types: 15XCHΛ (15KhSND), 14Г2 (14G2), 15Г (15GS) used in industry. Owing to its low carbon content, this steel shows good weldability, and its strength values and plasticity

Card 2/3

Elimination of ...

S/028/61/000/004/003/007
B103/B206

are higher than those of other low-alloy types. Substantial metal savings can thus be achieved in construction. 10G2S is less prone to cold-brittleness and less sensitive to aging than most low-alloy steels. On the basis of their data, the authors recommend elimination of copper from the type 10G2SD, and inclusion of the type 10G2S in GOST 5058-57. Its chemical composition in % is as follows: C - 0.12, Mn - 1.3-1.65, Si - 0.8-1.2, Cu, Cr, and Ni < 0.3, S and P < 0.04. Table 4 contains the mechanical properties. The Plant imeni Il'ich will thus save 426.6 t of copper annually in pipe production. This saving will be still higher when this steel is widely used in constructions.. There are 3 figures and 4 tables.

Legend to Table 4: (1) Thickness of rolled goods, (2) mechanical properties under tension, (3) temporary resistance, (4) yield point, (5) specific elongation, (6) minimum, (7) resilience at -40°C.

Толщина проката, мм	Механические свойства при растяжении			Ударная вязкость при температуре -40°C, кгс.м/см²
	Временное сопротивление, кгс/мм² 3	Предел текучести, кгс/мм² 4	Относительное удлинение, % 5	
4-7	52	38	18	—
8-32	50	35	18	3
33-40	48	34	18	—

Card 3/3

FETISOV, S.G., kand. tekhn. nauk; PROKHOROV, A.V., inzh.; STEPANOV, F.P., inzh.

Using MK-40 steel as a substitute for MS-1 and SKhL-4 nickel-containing steel. Stal' 24 no.10:927-930 O '64. (MIRA 17:12)

FOMINA, A.Ya., kand. veter. nauk; KONTRIMAVICHUS, L.M., kand. veter. nauk; PROKHOROV, A.V., kand. veter. nauk

Method of preparing tuberculosis antigen. Veterinariia 37
no.6:30-31 Je '60.
(MIRA 16:7)

1. Vsesoyuznyy institut eksperimental'noy veterinarii.
(Antigens and antibodies)
(Tuberculosis in poultry)

MIKHEYEV, V.S.; PROKHOROV, B.B.

Research of the young Siberian geographers. Izv. Vses. geog.
ob-va 96 no.6:537-540 N-0 '64 (MIRA 18:1)

POPOV, V.D., inzh.; PROKHOROV, B.F., kand.tekhn.nauk; SBOROVSKIY, A.K.,
kand.tekhn.nauk.

Dynamic characteristics of structural plastics. Sudostroenie 30
no.1:36-39 Ja '64.
(MIRA 17:3)

KALMYCHKOV, A.P., inzh.; PROKHOROV, B.F., inzh.

Strength of glued joints. Sudostroenie 29 no.5:38-41 My
'63. (Gluing) (Hulls (Naval architecture)) (MIRA 16:9)

S/229/62/000/011/002/002
E191/E435

AUTHORS: Kalmychkov, A.P., Engineer, Prokhorov, B.F., Engineer
TITLE: Tests of a plastic deckhouse of the motor vessel
"Raketa"

PERIODICAL: Sudostroyeniye, no.11, 1962, 58-63

TEXT: This is a continuation of a previous article (Sudostroyeniye, no.4, 1962) in which the design of a plastic deckhouse was discussed. The deckhouse material, a glass cloth reinforced plastic, was studied by tests of specimens and joints. The tensile and bending strengths were measured in specimens with the warp or weft of the cloth along the specimen, and in specimens with a crossed lay-up of the cloth layers. The thickness varied between about 1.8 and 3.3 mm. The tensile strength ranged from 1830 to 2850 kg/cm². Deflections were measured and Young's modulus values derived showing considerable variation (77000 to 137000 kg/cm²) between different types and thicknesses of specimens, generally increasing with thickness and highest when the warp is along the specimen. Specimens cut from material prepared under shop conditions were compared with laboratory
Card 1/2

Tests of a plastic deckhouse ...

S/229/62/000/011/002/002
E191/E435

specimens showing a drop of Young's modulus in tension from 120000 to 84000 kg/cm², a rise in Poisson's ratio from 0.11 to 0.27, a drop of tensile strength from 2100 to 1000 kg/cm² and small variations in other properties. After 2 hours boiling and 30 minutes in cold water, the loss of strength was about 20%. The ratio by weight of the glass cloth to the resin was about 1:1. Static tests were carried out on complete elements of the deckhouse such as the roof panel and the aerial attachment fitting. The permissible stress was assumed to be 410 kg/cm². It is considered that in view of the unknown fatigue properties, an actual measured stress reaching 50% of the permissible static stress is excessive. Vibration tests by exciting vibrations with an impact and measuring the decay with mechanical vibrographs have shown the plastic deckhouse to have 4 times the damping of its metal predecessor. Tests have shown that, owing to its small thickness, the nature of the material has little effect on sound insulation. There are 3 figures and 6 tables.

Card 2/2

ISAKOV, V.V., inzh.; KALMYCHKOV, A.P., inzh.; PROKHOROV, B.F., inzh.

Design and manufacture of plastic deck houses for the motorship
"Raketa." Sudostroenie 28 no.4:58-64 Ap '62. (MIRA 15:4)
(Hulls (Naval architecture)) (Glass reinforced plastics)

PROKHOROV, B.F., inzh.; RADZIVONCHIK, V.F., kand.tekhn.nauk;
SEменов, V.Ye., kand.tekhn.nauk

Using models to study the processes of die-stamping.
Sudostroenie 27 no.10:65-68 O '61. (MIRA 14:12)
(Sheet-metal work-Models)

MOROZ, P.A.; GALITSKOV, N.F.; PROKHOROV, B.M.

Experimental investigation of hydrodynamic processes in pipelines. Transp. i khran. nefi i nefprod. no.6:7-12 '64.

(MIRA 17:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy i proyektno-konstruktorskiy institut kompleksnoy avtomatizatsii neftyanoy i gazovoy promyshlennosti.

PROKHOROV, B.N.

Firing cyclone furnaces with sunflower seed hulls. Masl.-zhir.
prom. 17 no. 3: 22-25 Ag '52. (MLRA 10:9)

1. Energokhladomontazh.
(Fuel) (Sunflower seed)

PROKHOROV, B.N.

Adjusting a direct-action float-type steam regulator. Spirt. prom.
24 no.2:17-18 '58. (MIRA 11:3)
(Distillation apparatus) (Pressure regulators)

PROKHOROV, B.N., inzh.

Drying the powdered compound "Novost'" in small spray driers.
Masl.-zhir.prom. 25 no.2:31-36 '59. (MIRA 12:2)

1. Treat "Energonaladka."
(Drying apparatus)

PROKHOROV, B.N.

Experimental performance characteristics of vacuum
steam-jet units. Masl.-zhir.prom. 25 no.11:42-43 '59.
(MIRA 13:3)

1. Energotekhnaladka.
(Oleomargarine)

PROKHOROV, B.N., inzh.

Automatic control of piston-type compressors. Prom.energ. 17
no.4:9-11 Ap '62. (MIRA 15:4)

(Compressors)

1. ALERSHCHENSKIY, B. N.; PRUMOROV, S. N.
2. USSR (600)
4. Champagne (wine)
7. Automatic regulation of the process converting wine into champagne in reservoirs.
Vin. SSSR 12, No. 11, 1952.

9. Monthly List of Russian Accessions. Library of Congress. March, 1953. Unclassified

YELOVKOV, Yuriy Ivanovich; PROKHOROV, Boris Fedorovich; DEREVYANKO, Yu.G.,
nauchnyy red.; KAZAROV, Yu.S., red.; TSAL, P.K., tekhn. red.

[Corrugated materials for shipbuilding] Sudovye gofirovannyye
konstruktsii. Leningrad, Gos. soizuznoe izd-vo sudostroit. promyshl.,
1958. 95 p. (MIRA 11:10)

(Shipbuilding)

PROKHOROV, B. V.

112-3-5649D

Translation from: Referativnyy Zhurnal, Elektrotehnika, 1957,
Nr 3, p. 87 (USSR)

AUTHOR: Prokhorov, B. V.

TITLE: Use of an Artificial Line in Protection of Rotating
Machinery from Atmospheric Voltage Surges (Iskusstvennaya
liniya v skhemakh zashchity vrashchayushchikhsya mashin
ot atmosferykh perenapryazheniy)

ABSTRACT: Bibliographic entry on the author's dissertation for the
Degree of Candidate of Technical Sciences, presented
to the Leningrad Electrotechnical Institute imeni
V. I. Lenina (Leningr. elektrotekhn. in-t im.
V. I. Lenina), Leningrad, 1956.

ASSOCIATION: Leningrad Electrotechnical Institute imeni V.I.Lenin
(Leningr. elektrotekhn. in-t im. V. I. Lenina)

Card 1/1

PROKHOROV, B.V., kand.tekhn.nauk

Design of ladder networks with a small number of links not matched at the input and output terminals. Izv. vys. ucheb. zav.; energ. 6 no.4:101-104 Ap '63. (MIRA 16'5)

1. Ivanovskiy energeticheskiy institut imeni V.I.Lenina.
Predstavlena kafedroy teoreticheskikh osnov elektrotekhniki i elektricheskikh izmereniy.
(Electric networks)

PROKHOROV, D.A.

Organization of express train shipments. Zhel.dor.transp. 37
no.10:32-35 0 '55. (MLRA 9:1)

1.Dorozhnyy inspektor po marshrutizatsii perevozok Kuybyshevskoy
dorogi, Kuybyshev.
(Railroads--Making up trains)

PROKHOROV, D. P.

USSR/Miscellaneous - Industrial Processes

Card 1/1

Author : Prokhorov, D. P.

Title : Self-gripping driving pinch-dog for lathe work

Periodical : Stan. i Instr., No. 5, page 28, May 1954

Abstract : The advantages of a self-gripping driving pinch-dog designed and introduced by technologists Dremov and Erkin are outlined. The pinch-dog is of very simple construction and can be used for the machining of objects of various diameters. Drawing of the attachment is included.

Institution : ...

Submitted : ...

PROKHOROV, D.V., inzhener

Safety measures for the movement of trains during the construction
of contact network foundations and poles. Sbor. trud. Akad. zhel.
transp. no.2:142-158 '53. (MLRA 8:9)
(Railroads--Electrification)

PROKHOROV, Dmitriy Vasil'yevich, inzhener; GRINEVSKIY, I.A., inzhener
~~redaktor~~; VLASOV, I.I., inzhener; YUDZON, D.M., tekhnicheskiy
redaktor.

[Construction of contact systems on electric railways] Sooru-
zhenie kontaktnoi seti na elektrifitsiruemykh zheleznnykh dorogakh.
Moskva, Gos.transp.zhel-dor.izd-vo, 1955. 170 p. (MLRA 8:11)
(Electric railroads--Wires and wiring)

PROKHOROV, D.V.; BARSUNOV, K.P., redaktor; VERINA, G.P., tekhnicheskiiy redakter.

[Experience in constructing narrow-gauge railroads] Opyt postreiki uzko-
koleinei zheleznoi dorogi. Moskva, Gos.transp. zhel-der.izd-vo, 1956.
30 p. (Railroads, Narrow-gauge) (MIRA 9:6)

PROKHOROV, D.V., inzh.; KANEVSKIY, A.G., inzh.

Demonstration construction of houses along railroad lines. Transp.
stroil. 8 no.11:18-20 N '58. (MIRA 12:1)
(Railroads--Buildings and structures)
(Apartment houses)

PROKHOROV, D.V., inzh.

Construction of the "Road of Friendship" has started. Transp. stroi.
10 no.10:8-12 0 '60. (MIRA 13:10)
(Turkmenistan--Railroads--Construction)

PRONKO, D.V.

Has engaged of the Communist Youth League at construction sites of
transportation facilities in Kazakhstan and Central Asia. Transl.
stroil. 11 no.2:13-14 P '61. (CIA 17:2)
(Kazakhstan--Construction workers)
(Soviet Central Asia--Construction workers)

GOL'DMAN, M.S., inzh.; PROKHOROV, D.V., inzh.; TSVELODUB, B.I., inzh.

Practices in laying tracks without joints in the Hungarian
People's Republic. Transp. stroi. 14 no.8:52-54 Ag '64. (MIRA 18:1)

PROKHOROV, E.

Decisions of the Production Conference put into practice. Mast,
ugl. 9 no.1:16 Ja '60. (MIRA 13:8)

1. Sekretar' prezidiuma postoyanno deystvuyushchego proizvodst-
vennogo soveshchaniya shakhty imeni Ordzhonikidze Kemerovskogo
sovnarkhoza.

(Kuznetsk Basin--Coal mines and mining)
(Trade unions)

PROKHOROV, E.

Your share of labor. Mast.ugl. 9 no.8:18-19 Ag '60.
(MIRA 13:8)

1. Starshiy inzhener tresta Kuybyshevugol', Kuzbass.
(Kuznetsk Basin--Coal miners)

PROKHOROV, E., inzh.

Daring people. Mast. ugl. 9 no.9:13 S'60.

(MIRA 13:10)

1. Shakhta imeni Ordzhonikidze, Kemerovskogo sovnrarkhoza.
(Kuznetsk basin--Coal mining machinery--Technological innovations)

PROKHOROV, E.

In the front ranks. Mast. ugl. 9 no. 11:5 N '60.
(Coal mines and mining)

(MIRA 13:12)

PROKHOROV, E.

Experience in using technical information. NTO 3 no. 1:53-54
Ja '61. (MIRA 14:2)

1. Starshiy inzhener tresta "Kuybyshevugol'," Stalinsk,
Kemerovskoy oblasti.
(Stalinsk--Coal mines and mining)

PROKHOROV, E., inzh.

Damping timber slide. Sov. shakht. 10 no.7:18 J1 '61.
(MIRA 14:8)

(Mine haulage)

L 1169-66

ACCESSION NR: AP5017662

UR/0109/65/010/007/1252/1259
539.293.011.43

32
B

AUTHOR: Shekhovtsev, N. A.; Prokhorov, E. D.; Pyshnyy, M. M.

TITLE: Analysis of electronic processes in pnpn transistors

SOURCE: Radiotekhnika i elektronika, v. 10, no. 7, 1965, 1252-1259

TOPIC TAGS: pnpn transistor

ABSTRACT: An experimental curve $\alpha = f(I_e)$, where α is the current gain and I_e is the emitter current, for a pnpn transistor made from p-Ge and Sn is presented. The shape of the curve and the nature of phenomena transpiring in the pnpn transistor are explained theoretically. An equation showing the effect of I_e on the reduction of the potential barrier of the metal-semiconductor contact is developed as a result of analyzing the minority-carrier charge accumulated in the collector-p-region of the transistor. Also a formula is derived for the injection current by the metal-semiconductor contact which allows for accumulation of minority carriers in the collector p-region by I_e . The theoretical formulas $I_c = f(I_e)$ and $\alpha = f(I_e)$ are in good agreement with experimental results. Orig. art. has: 5 figures and 33 formulas.

Cerd 1/2

L 1169-66
ACCESSION NR: AP5017662

ASSOCIATION: none

SUBMITTED: 31Aug63

NO REF SOV: 003

ENCL: 00

OTHER: 004

SUB CODE: EC

Card 2/2 *SP*

PROKHOROV, E.D.; SHEKHOVTSOV, N.A.; PROKHOROV, A.D.

Deviation of concentrations from equilibrium in electron-electron
junctions. Radiotekh. i elektron. 9 no.12:2174-2183 D '64
(MIRA 18:1)

1. Khar'kovskiy gosudarstvennyy universitet im. A.M. Gor'kogo.

PROKHOROV, E.D.; SHEKHOVTSOV, N.A.; PROKHOROV, A.D.

Breakdown of electron-electron functions by minority carriers.
Radiotekhn. i elektronika no.11:2014-2021 N '64.

(RADA 17 12)

1. Khar'kovskiy gosudarstvennyy universitet imeni Gor'kogo,
radiofizicheskiy fakul'tet.

PROKHOROV, E., inzh.

Crusade for an economical use of timber. Sov.shakht. 10 no.5:
14-15 My '61. (MIRA 14:9)
(Kuznetsk Basin--Mine timbering)

L 16018-65 EWT(1)/EWG(k)/T/EWA(h) Pz-6/Peb IJP(c) AT
ACCESSION NR: AP4048886 S/0109/64/009/011/2014/2021

AUTHOR: Prokhorov, E. D.; Shekhovtsov, N. A.; Prokhorov, A. D.

TITLE: Penetration of electron-electron junctions by minority carriers

SOURCE: Radiotekhnika i elektronika, v. 9, no. 11, 1964, 2014-2021

TOPIC TAGS: electron electron junction, electron electron junction
penetration, minority carrier penetration, n n junction

ABSTRACT: The penetration of n-n⁺ junctions by minority carriers is studied on the basis of the expressions for electron and hole concentrations on both sides of the junction. A series of formulas lead to theoretical conclusions which the authors verified experimentally by means of a composition made of n-type Ge having a resistivity of 3 ohm-cm and electron and hole concentrations of 6.25×10^{14} and 10^{12} cm^{-3} , respectively. As the experimental data confirmed their theoretical calculations, the authors draw the following conclusions: 1) as the minority carrier concentration is increased in the n-region, both the potential barrier of the electron-electron junction and the field in the junction space charge region decrease simultaneously;

Card 1/2

L 18018-45

ACCESSION NR: AP4048886

2) the penetration of the $n-n^+$ junction depends on the majority carrier concentrations in n and n^+ regions; 3) penetration increases with increased minority concentration in the n -region; 4) at very large hole concentrations, the penetration increases to a maximum which is close to 1.00%. Orig. art. has: 24 formulas and 6 figures.

ASSOCIATION: Khar'kovskiy gosudarstvennyy universitet im. A. M. Gor'kogo, Radiofizicheskiy fakul'tet (Department of Radiophysics, Khar'kov State University)

SUBMITTED: 15Jul63

ENCL: 00

SUB CODE: SS

NO REF SOV: 005

OTHER: 007

ATD PRESS: 3140

Card 2/2

L 19031-65 EWT(l)/EWG(k)/T/EWA(h) Pg-6/Peb LJP(c)/AFWL/ASD(a)-5/ESD(t) AT

ACCESSION NR: AP5000459

S/0109/64/009/012/2174/2183

AUTHOR: Prokhorov, E. D.; Shekhovtsov, N. A.; Prokhorov, A. D.

TITLE: Deviation from equilibrium concentrations in electron-electron junctions

SOURCE: Radiotekhnika i elektronika, v. 9, no. 12, 1964, 2174-2183

TOPIC TAGS: semiconductor, nn junction

ABSTRACT: The accumulation and exclusion of carriers and the current-voltage characteristic allowing for these factors have been theoretically and experimentally investigated. Formulas describing the above phenomena are developed. Ge specimens $0.4 \times 0.034 \times 0.06$ cm with resistivities of 49, 40, and 10 ohm-cm were tested; potential distributions were measured by a point probe. These conclusions were reached: In the case of the high-resistance n-region, the carrier accumulation results in a higher conductance of the region and in a nonlinear increase in current. As the donor concentration in the n-region

Card 1/2

L 19031-65

ACCESSION NR: AP5000459

increases, the accumulation has a progressively lessening effect on the shape of the characteristic. The carrier exclusion particularly affects the current-voltage characteristic when the n-region material is of high resistivity. At a high concentration of majority carriers, the current-voltage characteristic of a structure with an $n-n^+$ junction approaches the characteristic of an ohmic-contact structure which has an equal slope for direct and reverse voltage applications. Orig. art. has: 6 figures and 37 formulas.

ASSOCIATION: Khar'kovskiy gosudarstvennyy universitet im. A. M. Gor'kogo (Kharkov State University)

SUBMITTED: 15Jul63

ENCL: 00

SUB CODE: EC

NO REF SOV: 002

OTHER: 008

ATD PRESS: 3157

Card 2/2

SHEKHOVTSOV, N.A.; PROKHOROV, E.D.; SAFRONOV, B.V.

Internal oscillations in transistors with p-n-p-m structure.
Radiotekh. i elektron. 8 no.10:1783-1786 O '63. (MIRA 16:10)

1. Khar'kovskiy gosudarstvennyy universitet im. A.M.Gor'kogo.

PROKHOROV, E.D.; SHEKHOVTSOV, N.A.

A transistor device for stretching impulses. Izv. vys.
ucheb. zav.; radiotekh. 5 no.3:394-396 My-Je '62.
(MIRA 15:9)

1. Rekomendovano kafedroy fiziki sverkhvysokikh chastot
Khar'kovskogo gosudarstvennogo universiteta imeni A.M.
Gor'kogo.

(Pulse circuits)
(Pulse techniques (Electronics))

PROKHOROV, E., inzh.

Reliable brakes. Sov.shakht. 10 no.6:18 Je '61. (MIRA 14:9)
(Fans, Mechanical)

39711
S/142/62/005/002/014/019
E192/E582

44310

AUTHORS: Shekhovtsov, N.A., Prokhorov, E.D. and Karasik, Ye.A.

TITLE: Influence of the metal-semiconductor boundary on the electrical characteristics of transistors

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy,
Radiotekhnika, v. 5, no. 2, 1962, 265 - 268

TEXT: The system considered is illustrated in Fig. 1a. This is a p-n-p-m transistor where m is a metal. The influence of the metal-semiconductor boundary was investigated for the following metals: pure Pb and pure Sn (having work-functions of 4.15 and 4.51 eV), In and a Pb-Sn alloy. The experimental transistors were based on p-type Ge having a resistivity of 10^{-4} cm, which resulted in high collector voltages and large pulse currents. The work function of all the metals was lower than that of Ge, so that potential barriers of different heights could be obtained at the metal-semiconductor boundary. The experimental samples were prepared by the double-diffusion method and the area of the emitter junction was 0.12 mm^2 . The forward and reverse characteristics for the metal-semiconductor

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Influence of

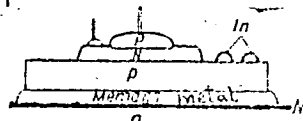
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E192/E382

boundaries were plotted experimentally. Also, the current gain as a function of the emitter current for the transistor operating in the common-base circuit was measured for all the metals (Pb, Sn, In and the alloy). It was found from this that the gain could be greater than unity and increased with reduction of the height of the potential barrier. The switch-on current of the transistors was also measured and it was found that this was about 2 mA in the case of Sn but 4 mA for the alloy and much greater in the case of transistors with a Pb metal boundary. As regards the pulse current, it was found that, other conditions being equal, this increased with decreasing potential barrier. There are 6 figures.

ASSOCIATION: Kafedra fiziki sverkhvysokikh chastot Khar'kovskogo gos. universiteta im. A.M. Gor'kogo (Department of Ultrahigh-frequency Physics of Khar'kov State University im. A.M. Gor'kiy).

SUBMITTED: June 12, 1961

Fig. 1a:



Card 2/2

SHEKHOVTSOV, N.A.; PROKHOROV, E.D.; KARASIK, Ye.A.

Effect of the metal-semiconductor boundary on the electrical characteristics of transistors. Izv. vys. ucheb. zav.; radiotekh. 5 no.2:265-268 Mr-Apr '62. (MIRA 15:7)

1. Rekomendovano kafedroy fiziki sverkhvysokikh chastot Khar'kovskogo gosudarstvennogo universiteta imeni A.M.Gor'kogo.
(Transistors)

SHEKHOVTSOV, N.A.; PROKHOROV, E.D.

Inductive characteristics of a double-base diode. Izv. vys.
ucheb.; radiotekh. 5 no.1:126-127 Ja-F '62. (MIRA 15:5)

1. Rekomendovano kafedroy fiziki sverkhvysokikh chastot
Khar'kovskogo gosudarstvennogo universiteta imeni A.M. Gor'kogo.
(Transistors)
(Diodes)

BA

14

Regeneration of amino resins used for adsorbing acids in chemical treatment of water. F. G. Prokhorov and K. A. Yankovskii. U.S.S.R. 65,889, Feb. 29, 1946. - Ammo. resins used for desalting water are washed with water passed through a Na base exchanger. M. H.

ASB-5LA METALLURGICAL LITERATURE CLASSIFICATION

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CA

1st AND 2nd ORDERS

PROCESSES AND PROPERTIES INDEX

Increasing the acid-absorption capacity of sorbents.
F. G. Prokhorov. U.S.S.R. 66,312, May 31, 1949. The
acid-absorption capacity of sorbents is increased by sub-
jecting them periodically to a reducing treatment, e.g.
with Fe or Zn fillers in an acid medium. M. Huseh

COMMON ELEMENTS

PERIODIC TABLE

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

EXTRA INDEX

EXTRA INDEX

[illegible]

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CA

PROCESSES AND PROCEDURES

Countercurrent process for water softening. P. G. Prokhorov and K. A. Yankovskii. *Izv. VTI, 1960, yuz. Teploelek. Inst. im. F. Dzerzhinskogo* 15, No. 3, 8-12 (1960). Passing the feed water and the regenerating soln. in opposite directions saves salt in regeneration. When the regenerating soln. is concd., e.g., 10% NaCl, it is preferable to pass it downward and the feed water upward. With dil. regenerating solns. the direction is immaterial. M. Hosh

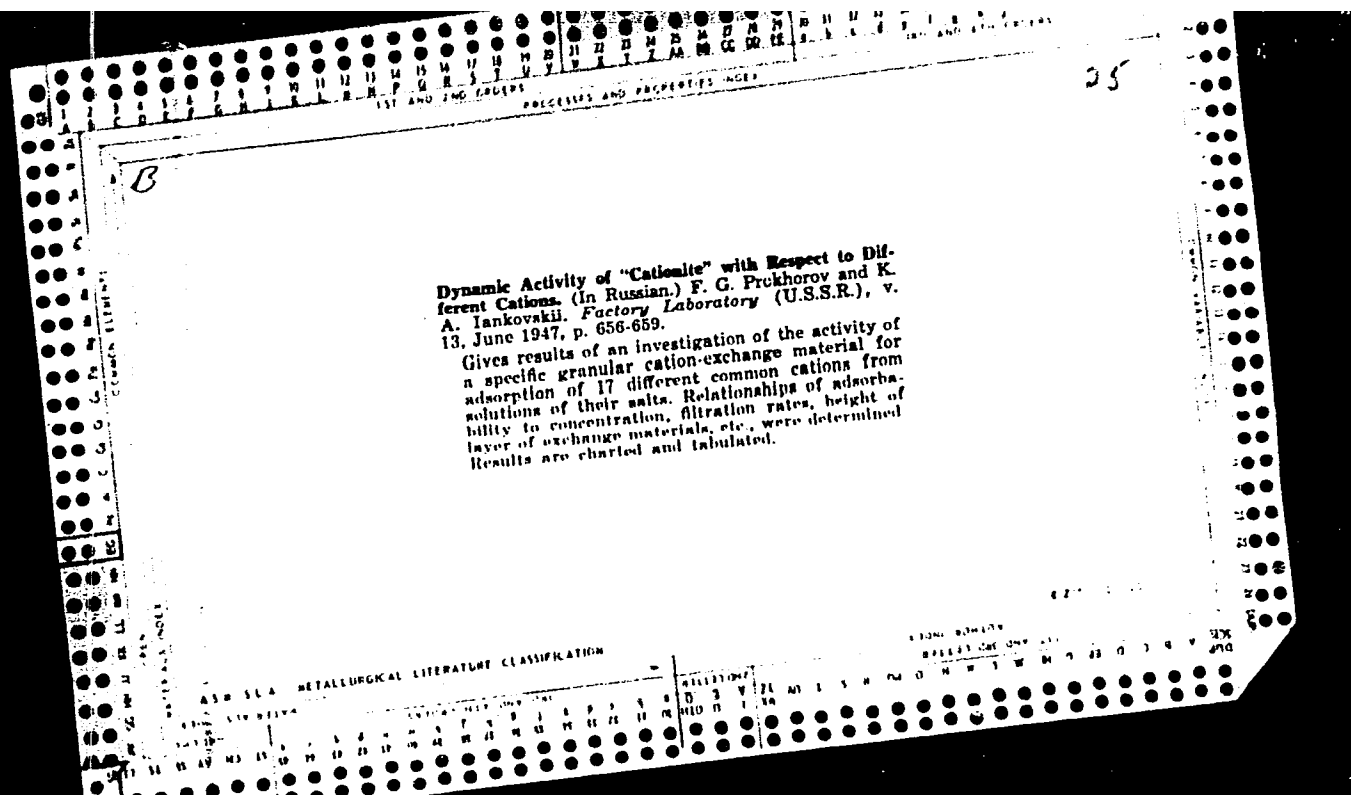
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Development of water-softening technique. Yu. M. Kostrikin, F. G. Prokhorov, and A. P. Mamet. *Invent. P. F. I.* 15, No. 4, 10, 39-42 (1945). - A review of the development of feed-water prepn. in the U.S.S.R. M. H.

The softening of municipal water supplies. L. G. Kinsey. *J. Junior Inst. Engrs.* (London) 56, 2, 0 56 (1940). - A discussion of the Clark process, excess-lime process, development of the Clark process, excess-lime process, Accelerator process, lime and lime-proportioning app., alumina-proportioning app., sludge, stabilizing treatment, base-exchange process, zeolite, and base-exchange plant. Leopold Scheffan



CM

Organic cation-exchangers. F. G. Prokhorov and M. G. Korneyeva. *Izvest. VTI (Vsesoyuz. Tekhn. Inst.)* 16, No. 6, 1-6 (1947); *Chem. Zentr.* (Russian Zone Ed.) 1948, I, 1046. The manual, composition, and properties of Wofatite P, C, D, K, and KS, Zeocarb, Amberlith 1-R-100, and the Russian Sulfocoals (brown or mineral coal treated with oleum contg. 20% SO₃) are reported. Wofatite P showed the greatest resistance to hot, alk. waters. The Sulfocoals were satisfactory in acid media. M. G. Moore

ИВАНОВ, Ф. Г. ИВАНОВА, С. С.

Cations

Dynamics of cation exchange, and the distribution of cations in a layer of cationite. Izv. VTI 21 no. 4 (1952)

9. Monthly List of Russian Accessions, Library of Congress, August ²195~~2~~/Unclassified.

PROKHOROV, F. G.

USSR/Chemistry - Analysis, Cation Exchange Apr 52

"Dynamics of Cation Exchange and Distribution of
Cations in Cationite Layer," F. G. Prokhorov,
Cand Tech Sci, S. S. Ivanova, Sr Tech

Iz v-s Teplotekh Inst" No 4, pp 8-13

Experimentally investigates filtration of soln
with several unlike cations through H-cationite.
Reveals mutual displacement of cations previously
absorbed by cationite from initial soln. Chromato-
graphic distribution of absorbed cations occurs
when cations are distributed according to decrease
in extent of their mobility, those with max mobil-
ity being observed in upper part of layer. Presents
numerous diagrams. 21677

MOROZOV, S. G., Eng.: PROKHOROV, F. G.

USSR (600)

Filters and Filtration

Slotted drain caps VTI-K and VTI-5. Elek. sta , 23, No. 6, 1952.

Monthly List of Russian Accessions, Library of Congress, October 1952. UNCLASSIFIED

PRONIKROV, F. G.

The Committee on Stalin Prizes (of the Council of Ministers USSR) in the fields of science and inventions announces that the following scientific works, popular scientific books, and textbooks have been submitted for competition for Stalin Prizes for the years 1952 and 1953. (Sovetskaya Kultura, Moscow, No. 22-40, 20 Feb - 3 Apr 1954)

<u>Name</u>	<u>Title of Work</u>	<u>Nominated by</u>
Rubinshteyn, Ya. M.	"General Thermal Engineering"	Moscow Power Engineering
Blyudov, V. P.	(student manual, 2d edition)	Institute imeni V. M.
Vyhubov, D. H.		Molotov
Kornitskiy, S. Ya.		
Litvin, A. M.		
Luknitskiy, V. V.		
Morozov, N. G.		
Prekhorov, F. G.		
Yakub, B. H.		

SO: W-50604, 7 July 1954